

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A power converting apparatus having a non-insulated converter and a non-insulated inverter to convert direct current power inputted from a power supply to alternating current power and to supply the alternating current power to a commercial power system which is grounded, said apparatus further comprising:

a detector for detecting a ground fault in response to a varied potential to ground of the power supply; and

a controller for generating the varied potential to ground of the power supply while the detector is detecting for a ground fault, wherein generating the varied potential to ground of the power supply includes varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so as to control a potential to the ground of the power supply while a switching operation of the inverter is continued.

2. (Currently Amended) The apparatus according to claim 1, wherein said controller executes the control generates the varied potential to ground to make a magnitude of the potential to ground at an arbitrary position in the power supply have a value not less than a predetermined value.

3. (Original) The apparatus according to claim 1, wherein when the ground fault is detected by said detector, said controller records information related to the ground fault in a memory.

4. (Original) The apparatus according to claim 3, wherein the information recorded in the memory includes at least the input voltage or intermediate voltage at the time of ground fault detection.

5. (Original) The apparatus according to claim 1, wherein said detector detects the ground fault at least at two detection levels, and when the ground fault is detected, said controller records information related to the ground fault in a memory for each detection level.

6. (Original) The apparatus according to claim 5, wherein the information recorded in the memory includes at least the input voltage or intermediate voltage at the time of ground fault detection.

7. (Original) The apparatus according to claim 5, wherein when the ground fault is detected, said controller predicts a ground fault position and/or a ground fault resistance value on the basis of the input voltage and intermediate voltage for each detection level and records a prediction result in the memory.

8. (Original) The apparatus according to claim 1, wherein said detector detects the ground fault at least at two detection levels, and upon detecting the ground fault, outputs a ground current value, and when the ground fault is detected, said controller records information related to the ground fault in a memory for each detection level.

9. (Original) The apparatus according to claim 8, wherein the information recorded in the memory includes at least the input voltage, intermediate voltage, and ground current value at the time of ground fault detection.

10. (Original) The apparatus according to claim 8, wherein when the ground fault is detected, said controller calculates a ground fault position and/or a ground fault resistance value on the basis of the input voltage, intermediate voltage, and ground current value for each detection level and records a calculation result in the memory.

11. (Currently Amended) The apparatus according to claim 1, wherein said controller ~~executes the control generates the varied potential to ground~~ within a predetermined time T1.

12. (Currently Amended) The apparatus according to claim 11, wherein after the ~~control is executed varied potential to ground is generated~~, said controller

does not ~~execute the control~~ generate a subsequent varied potential to ground until a predetermined time T2 shorter than the predetermined time T1 has elapsed.

13. (Currently Amended) The apparatus according to claim 1, wherein said controller ~~executes the control generates the varied potential to ground~~ when the direct current power input from the power supply has a value not more than a predetermined value.

14. (Currently Amended) The apparatus according to claim 1, wherein when the ground fault is detected, said controller stops power supply to the commercial power system, resumes power supply after a predetermined time, and ~~executes the control generates a subsequent varied potential to ground~~ to confirm whether a ground fault is detected once or a plurality of number of times.

15. (Original) The apparatus according to claim 1, wherein said power supply comprises a plurality of direct current power supply units connected in series.

16. (Original) The apparatus according to claim 1, wherein said power supply is a solar battery.

17. (Currently Amended) A solar power generation apparatus comprising:

a power supply for supplying direct current power; and  
a power converting apparatus having a non-insulated converter and a  
non-insulated inverter to convert direct current power inputted from said power supply to  
alternating current power and to supply the alternating current power to a commercial  
power system which is grounded, said power converting apparatus further comprising:

a detector for detecting a ground fault in response to a varied potential to  
ground of said power supply; and

a controller for generating the varied potential to ground of said power  
supply while the detector is detecting for a ground fault, wherein generating the varied  
potential to ground of the power supply includes varying an input voltage of the converter  
and/or an intermediate voltage between the converter and the inverter ~~so as to control a~~  
~~potential to the ground of said power supply while a switching operation of the inverter is~~  
~~continued.~~

18. (Original) The apparatus according to claim 17, wherein said  
power supply comprises a plurality of direct current power supply units connected in series.

19. (Original) The apparatus according to claim 17, wherein said  
power supply is a solar battery.

20. (Currently Amended) A control method of a power converting  
apparatus which has a non-insulated converter and a non-insulated inverter to convert

direct current power inputted from a power supply to alternating current power and to supply the alternating current power to a commercial power system which is grounded, said method comprising the steps of:

generating a varied potential to ground of the power supply while detecting for a ground fault, wherein generating the varied potential to ground of the power supply includes varying an input voltage of the converter and/or an intermediate voltage between the converter and the inverter so as to control a potential to the ground of the power supply while a switching operation of the inverter is continued; and

detecting a ground fault in response to the varied potential to ground of the power supply.

21. (Cancelled)

22. (Currently Amended) The apparatus according to claim 17, wherein said controller executes the control generates the varied potential to ground within a predetermined time T1.

23. (Currently Amended) The apparatus according to claim 22, wherein after the control is executed varied potential to ground is generated, said controller does not execute the control generate a subsequent varied potential to ground until a predetermined time T2 shorter than the predetermined time T1 has elapsed.

24. (Currently Amended) The method according to claim 20, wherein  
the ~~control is executed~~ varied potential to ground is generated within a predetermined time  
T1.

25. (Currently Amended) The method according to claim 24, wherein  
after the ~~control is executed, the control does not execute~~ varied potential to ground is  
generated, a subsequent varied potential to ground is not generated until a predetermined  
time T2 shorter than the predetermined time T1 has elapsed.